IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Claims 1-20 (canceled)

21. (currently amended) A large manipulator with an articulated mast (22), which is linked to a mast base (21) rotatable about a vertical axis (13) on a chassis (11), the articulated mast having one end connected to the mast base with the other end being a free end (27) ending in a mast tip (33), the large manipulator comprising at least

three mast arms (23 to 27) limitedly pivotable about respectively parallel horizontal articulation axis (28 to 32) relative to the mast base (21) or an adjacent mast arm (23 to 27) via a respective drive unit (34 to 38),

a control unit (70) for actuating the drive units (34 to 38) for mast movement, the control unit including a coordinate transformer (74, 76) that responds to guiding parameters (*r, h*) for the mast tip (33) or for an end hose (43) located thereon, and to measured angular values that are determined by means of angle sensors (44 to 48) on the mast arms (23 to 27) for translation into articulation axis referenced movement signals ($\Delta\alpha_v$) for the drive units (34 to 38) in accordance with predefined path/slew characteristics,

wherein geodetic angle sensors (44 to 48) which determine earth referenced angular values (ε_v) of the individual mast arms (23 to 27) are disposed in a rigid manner on the mast arms (23 to 27) away from the articulation axis, and

wherein the coordinate transformer is fed with ~~acted upon by~~ the measured angular values (ε_v) of the geodetic angle sensors (44 to 48).

22. (previously presented) The large manipulator according to Claim 21, wherein the guiding parameters (*r, h*) for the mast tip (33) or for an end hose (43) are provided in a chassis-referenced coordinate system.

23. (previously presented) The large manipulator according to Claim 21, wherein in addition a geodetic angle sensor (49) is provided on the mast base (21) for measurement of an earth referenced angle value associated with the mast base (21).

24. (previously presented) The large manipulator according to Claim 21, wherein at least one geodetic angle sensor is provided on the chassis (11) for measurement of at least one earth referenced angle value associated with the chassis.

25. (previously presented) The large manipulator according to Claim 21, wherein the geodetic angle sensors (44 through 48) are tilt angle sensors responsive to the gravity of the earth.

26. (previously presented) The large manipulator according to Claim 21, wherein the coordinate transformer includes a software routine (76) for conversion of earth referenced mast arm base angle values (ε_v) into articulation angles (α_{iv}).

27. (previously presented) The large manipulator according to Claim 21, wherein the coordinate transformer includes a software routine for translating earth referenced mast arm base angle values (ε_v) into chassis referenced cylinder coordinates (*r, h*) for the mast tip or the end hose.

28. (currently amended) The large manipulator according to Claim 21, wherein the coordinate transformer includes a software routine (74) for conversion of the guide or command value (r) into ~~guide~~ command articulation angles (α_{sv}) in accordance with a predetermined path/slew characteristic of the articulated mast (22).

29. (currently amended) The large manipulator according to Claims 21, wherein a software routine (78) responsive to dynamic angle measurement values (α_{iv}) is provided for the dividing thereof into low frequency and high frequency angle measurement value components.

30. (currently amended) The large manipulator according to Claim 29 [[28]], wherein a group of articulation axes referenced control comparers (90), which are fed with ~~acted upon by the~~ stationary or low frequency measurement component (α_{iv}^{N}) of the articulation axes based articulation angles (α_{iv}) as instantaneous values and the articulation axes based guide articulation angles (α_{iv}) as set or desired values, and which are connected on the output side with an articulation axes based command variable ~~or steering value~~ controller (84) for control or actuation of the drive units (34 through 38) of the associated articulation axes (28 through 32).

31. (previously presented) The large manipulator according to Claim 29, wherein a group of articulation axes based or referenced error value controllers (86), which are acted upon with the articulation axes high frequency component (α_{v}^{H}) of the articulation angle and which are connected to the signal inputs (88) of the associated drive units (34 through 38) of the articulation axes (28 through 32) with formation of an error magnitude input circuit.

32. (currently amended) The large manipulator according to Claim 31, wherein the error magnitude controllers (86) are preceded by a software routine (80) responsive to the earth referenced angle measurement values (ε_V) and the high frequency summed component (α^H) ~~(αH)~~ of the articulation angles for determining the articulation axes based high frequency component (α_v^H) of the articulation angles.

33. (currently amended) A large manipulator comprising:

a chassis (11),

a mast base (21) on the chassis (11),

an articulated mast linked to the mast base (21) and rotatable about a vertical axis (13), the articulated mast (22) having a free end (27) ending in a mast tip (33) and comprising at least three mast arms (23 to 27) limitedly pivotable about respectively parallel horizontal articulation axis (28 to 32) relative to the mast base (21) or an adjacent mast arm (23 to 27) via a respective drive unit (34 to 38),

a control unit (70) for actuating the drive units (34 to 38) for mast movement, the control unit including a coordinate transformer (74, 76) which responds to guiding parameters (*r, h*) for the mast tip (33) or for an end hose located thereon and to measured angular values that are determined by means of angle sensors (44 to 48) on the mast arms (23 to 27) away from the articulation axis for translation into articulation axis referenced movement signals ($\Delta\alpha_v$) for the drive units (34 to 38) in accordance with predefined path/slew characteristics,

wherein one GPS-module is rigidly provided on each mast arm for determining the earth referenced position measurement value of the individual mast arms, and

wherein the coordinate transformer is fed with ~~acted upon by~~ the position measurement values of the GPS module.

34. (previously presented) The large manipulator according to Claim 33, wherein the guiding parameters (*r, h*) for the mast tip (33) or for an end hose (43) are provided in a chassis-referenced coordinate system.

35. (previously presented) The large manipulator according to Claim 33, wherein in addition a GPS module is associated with the mast base for measurement of an earth referenced position measurement value associated with the mast base.

36. (previously presented) The large manipulator according to Claim 33, wherein in addition at least one GPS module is provided associated with the chassis for measurement of at least one chassis associated earth referenced position measurement value.

37. (previously presented) The large manipulator according to Claim 33, wherein the coordinate transformer includes a software routine (74) for conversion of earth referenced mast arm based position measurement values into articulation angles (α_{iv}).

38. (previously presented) The large manipulator according to Claims 33, wherein that the coordinate transformer includes a software routine (74) for conversion of the guide or command value (r, h) into guide articulation angles (α_{sv}) in accordance with a predetermined path/slew characteristic of the articulated mast (22).

39. (previously presented) The large manipulator according to Claim 33, wherein a software routine (78) responsive to the dynamic position measurement values, for their distribution or subdivision into low frequency and high frequency position measurement components.

40. (currently amended) The large manipulator according to Claim 37, wherein a group of articulation axes based control comparers (90), are fed ~~which can be acted upon with the~~ stationary or low frequency components (α_{iv}^{N}) of the articulation angle (α_{iv}) as instantaneous values and the command angles (α_{sv}) as desired or set values and which, on the output side, are connected with respectively one articulation axes based command variable ~~value~~ controller (84) for actuating the drive units of the associated articulation axes (28 through 32).

41. (previously presented) The large manipulator according to Claim 38, wherein a group of articulation axes associated error value controllers (86), which can be acted upon with the articulation axes based high frequency components (α_{v}^{H}) of the articulation angles and which are connected to the signal inputs (88) of the associated drive units (34 through 38) of the articulation axes (28 through 32) with formation of an error magnitude circuit input.

42. (previously presented) The large manipulator according to Claim 41, wherein the error value controllers (86) are preceded with a software routine (80), responsive to the earth referenced position measurement values and the high frequency component (α^{H}) of the articulation angle, for determining the articulation axes based high frequency component (α_{v}^{H}) of the articulation angle.